



iab.

Internet advertising revenue report

Full year 2019 results & Q1 2020 revenues



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Prepared by



www.iab.com
www.pwc.com/e&m

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Q1 2020 revenues and Summary

Q1 2020 revenues

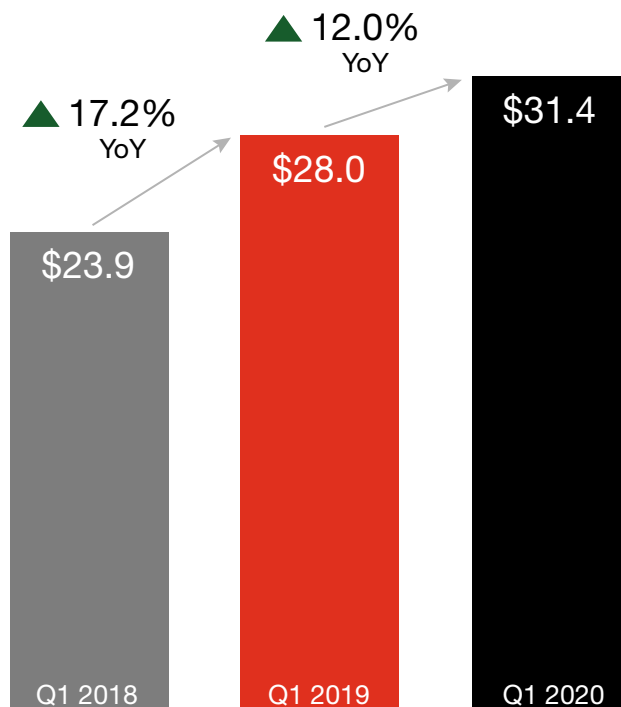
COVID-19 impacted advertising revenues starting in March

There was a consistent theme mentioned in Q1 2020 publicly available documents from the top ad-selling companies. January and February were strong growth months as in years past, however, March was sharply impacted by the coronavirus. This is evident as Q1 2020 revenues grew to \$31.4 billion, only a 12.0% increase, from the prior Q1 period.

While this is still impressive for any media type, the advertising revenue growth from Q1 2018 to Q1 2019 was 17.2%. Q1 2020 revenues mark the slowest year over year quarter growth since 2010, when revenues increased 8.6% from the prior year.

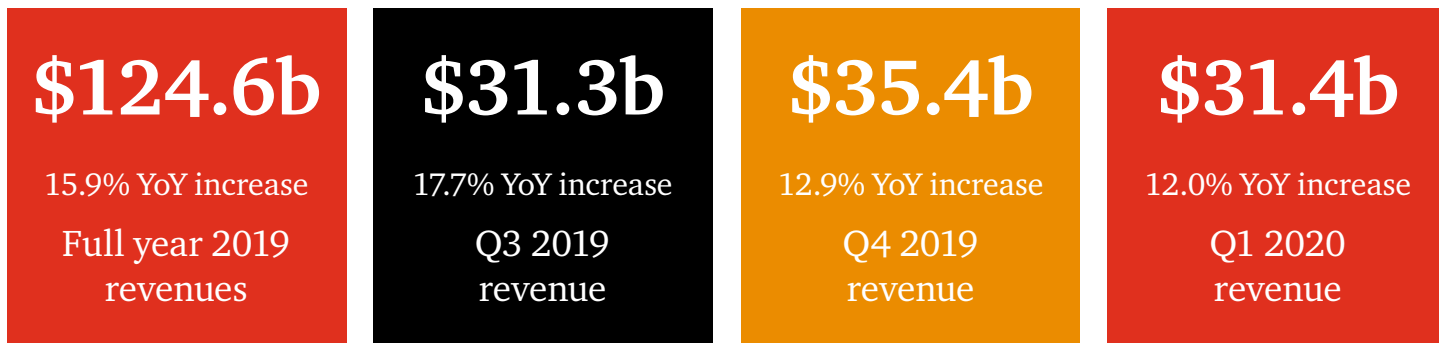
Many companies are expecting a continuing negative impact to Q2 and significant uncertainty as to the severity and duration to the quarters beyond Q2. It is unknown if advertisers will continue to slash or pull budgets for industry verticals that have been severely impacted by COVID-19. Also, as news sites have been dominated by stories associated COVID-19, many advertisers don't want to be associated on pages with those articles. Both of these factors contribute to the outlook by several public companies that growth of advertising revenues in the future continue to be a question mark.

Q1 2020 Internet advertising revenues (\$ billions)



Source: IAB/PwC Internet Ad Revenue Report, FY 2019

Summary



Key trends underlying FY 2019 results

More advertising dollars continue to be spent on the internet, far greater than any other media. Internet advertising revenues in 2019 continued to show impressive growth at 15.9%, reaching \$124.6b. This number is \$17.1 billion greater than the record setting growth experienced in 2018.

This is the first year we saw a shift towards slower growth than in prior years. While the rate of growth appears to be slowing, as 2019 marked the lowest growth rate since 2012, it is still growing at a remarkable 16% and has on average remained a double-digit growth rate for more than two decades. Though internet advertising may be slowing, it's still being supported by second generation social media companies that will continue to spur innovation and gain market share and dollars.



2019 performed largely as expected, with modest increases in digital ad spend. What no one could expect is a pandemic that has impacted our global economy. As important as it is to learn from our past, we must look forward to the opportunities and challenges that lie ahead for digital advertising, including ways to balance supply and demand as budgets shrink due to the impact of the coronavirus, the death of third party cookies which could dramatically change advertising products and capabilities, as well as an outdated video buying marketplace that is in need of innovation to accommodate the growth of digital video.”

| Randall Rothenberg, CEO, IAB



The 2019 Internet advertising report demonstrates that even while the digital advertising industry matures, innovation continues to propel the growth of the industry at rates far surpassing other ad supported media.”

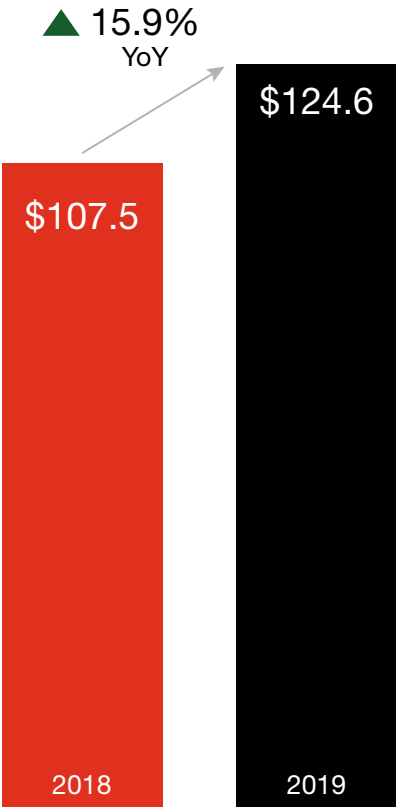
| David Silverman, Partner, PwC

Full year 2019 revenues

Pace of growth slows to 15.9% year over year

Revenues for FY 2019 totaled \$124.6 billion, \$17.1 billion (15.9%) higher than in FY 2018. Internet advertising revenues show strong growth albeit at a slower pace.

FY 2019 vs. 2018 Internet advertising revenues (\$ billions)



Source: IAB/PwC Internet Ad Revenue Report, FY 2019

2019 in review and looking ahead

Digital ad revenue was \$124.6 billion for the full year of 2019. This represented a 15.9% increase over the \$107.5 billion total for 2018. As noted in the half year IAB internet advertising revenue report, the percentage increase for the first half of 2019 was lower than that of 2018; 23.1% from the first six months of 2017 to 2018 compared to 16.9% from the first six months of 2018 to 2019. In line with this trend, while ad revenue showed strong growth from 2018 to 2019, it increased at a decelerated rate. We view this as an inevitable trend as the industry matures. While much of the growth has resulted from the continued shift from non-digital and rise of consumer media usage, a portion has also stemmed from the rise of new technologies. Augmented reality (AR) and virtual reality (VR) devices are continuing to forge ahead and gain traction among younger demographics. Advertisers will have to solve for innovative ways to engage this new type of audience so their brands are within closer reach through the eyes of these VR and AR enabled devices. As consumer shifts to digital are maturing, we will look to the next wave of innovation to fuel future advertising revenue growth in the years to come.

Given the convenience and ubiquity of mobile devices, the percent of time people are spending on phones has been rapidly increasing over the last several years. Publishers and social media platforms understand this and have created attention grabbing applications that advertisers are keen to be part of so they can meet a potential consumer. As such, ad dollars are continuing to shift to mobile devices. However, speaking of maturing, internet ad revenue derived from mobile devices reached \$86.7 billion in 2019 which represented a 24% increase over 2018 revenues of \$69.9 billion. Mobile ad revenues have been on a rampant growth curve for several years which was unprecedented, but we are now seeing that trajectory is beginning to slow. This 24% increase was the lowest mobile growth on record as the slowest growth prior to 2019 was a 36% increase from 2016 to 2017. Even though growth may have reached its peak, there is still untapped potential in this space. The recent proliferation of shoppable ads across different platforms advances the concept

of an omni-channel world and gives advertisers another venue to interact with a customer outside the brick and mortar stores. Internet advertising revenues may have found another way to continue reaching new highs.

Of the advertising formats tracked in this report, video has been the leader of the pack and this year is no different. With the vast content libraries in the OTT space and the creativity that's uploaded daily to video-sharing platforms, all eyes are on video for long periods of time. This means advertisers can reach almost any audience within this format. It's not surprising that internet ad revenue from digital video was \$21.7 billion in 2019. This represented a 33.5% increase over 2018 revenues of \$16.3 billion. More staggering was the rate at which mobile video continued to exceed expectations with a 43.9% growth rate in 2019. The proliferation of the social stories format is helping this growth and has been a significant contributing factor with how brands connect with audiences in an authentic way. As competition for attention increases, advertisers are dependent upon creativity for cutting through the clutter combined with relevance for ROI. Advertisers have found that digital video is highly conducive to entertaining every generation of consumer and thus more are choosing the digital video format which is eliciting further growth.

It's difficult to look back at advertising revenues in 2019 without noticing how often "social" was a common thread. Social media advertising accounts for nearly one third (28.6%) of all internet advertising revenues and will continue to grow. Revenues were \$35.6 billion in 2019, a 23% increase over 2018 revenues of \$28.9 billion. The value proposition to advertisers is the unparalleled targeting capabilities these players are able to offer. With their troves of valuable data and their ability to integrate ads to appear in a native format, brands know how to reach consumers in the most effective and least disruptive way. The ability for these platforms and advertisers to innovate together, while keeping the customer at the forefront of mind, will be a driving force in this industry.

Full year trends

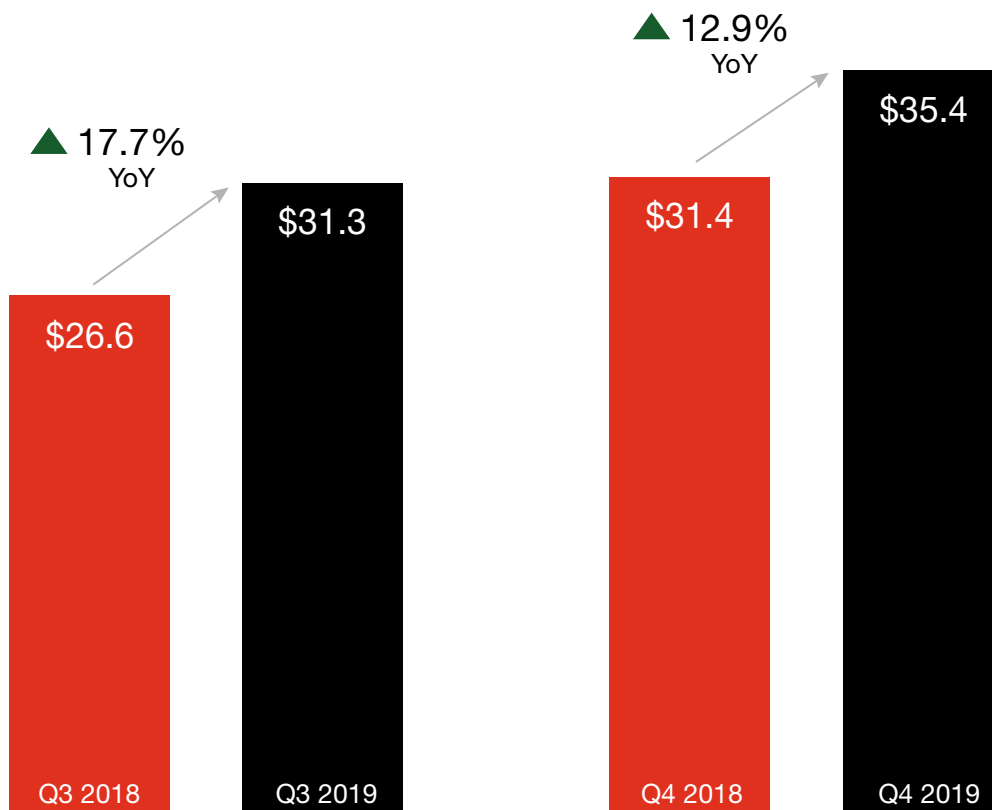
Quarterly growth

Second half revenues totaled an unprecedented \$66.7 billion

Total revenues in the fourth quarter of 2019 totaled \$35.4 billion which represented a 12.9% increase over total revenues in the fourth quarter of 2018 and a \$4.1 billion or 13.3% increase over total revenues in the third quarter of 2019.

Q3 2019 revenues were \$4.7 billion greater than Q3 2018 revenues, a 17.7% increase. The higher growth in Q3 is mainly attributed to stronger mobile and video revenues.

Q3/Q4 2019 vs. Q3/Q4 2018 Internet advertising revenues (\$ billions)



Source: IAB/PwC Internet Ad Revenue Report, FY 2019

Desktop vs. mobile revenues

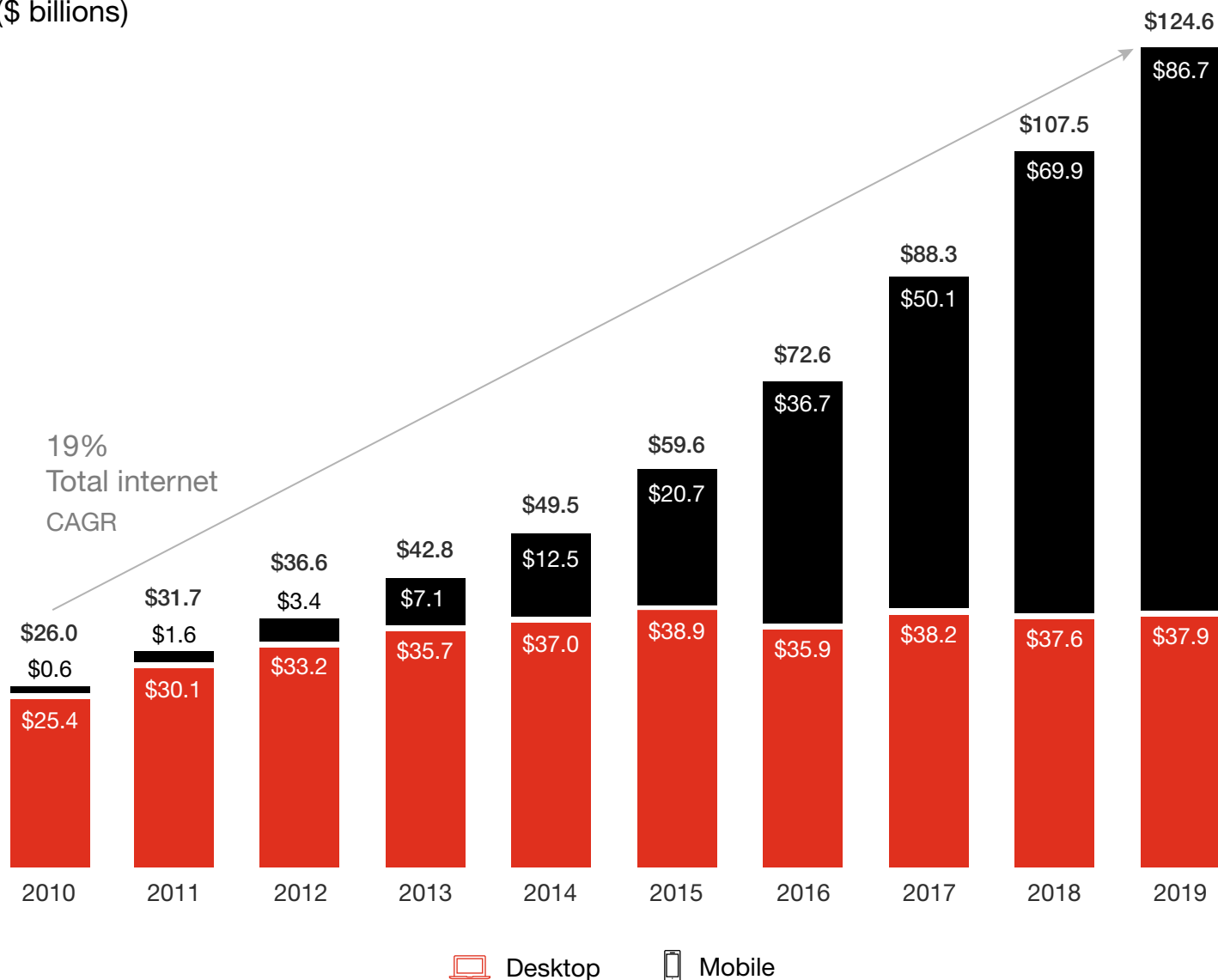
Mobile growth remains strong with showing signs of maturing

Mobile internet advertising revenues increased 24.0%, growing its share of total revenues from 65.1% in FY 2018 to 69.6% in FY 2019. Marketers are able to target their advertisements to the screen that best delivers the KPI(s) for the objective at hand. While mobile is the preferred device, the rate of growth for mobile has been slowing over recent years as the underlying platform is maturing.

Total internet advertising revenues have seen a compound annual growth rate (CAGR) since 2010 of 19.0%. Mobile CAGR over the same period is 73.8% while desktop is growing at a modest 4.5% CAGR.

Desktop vs. mobile full year internet ad revenues (2010-2019)

(\$ billions)



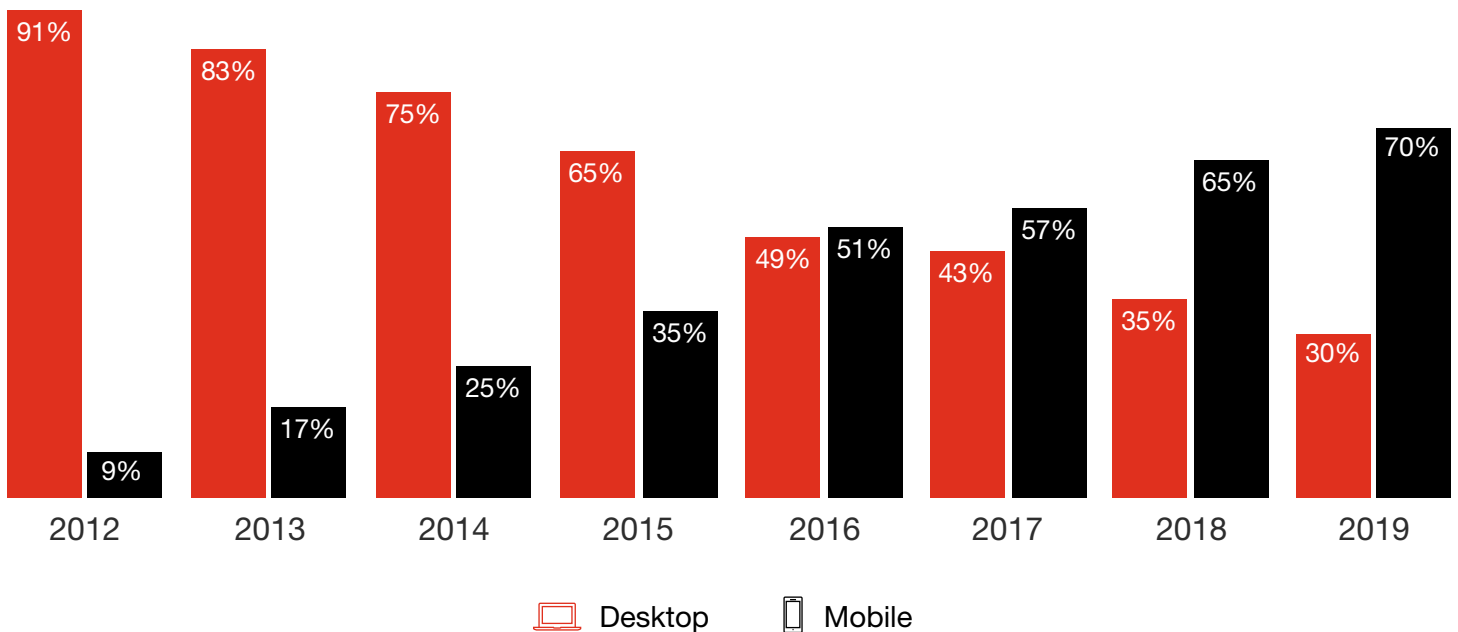
Source: IAB/PwC Internet Ad Revenue Report, FY 2019

Desktop vs. mobile, by percentage

\$7 out of every \$10 is derived from a mobile device

Mobile ad revenue grew 24% year over year from 2018 which is less than the 40% growth we saw from 2017 to 2018. Mobile devices now make up 69.6% of internet advertising revenue share. Mobile ad revenues are those revenues generated on devices such as smartphones and tablets.

Historical desktop vs. mobile trends, full year results (2012 - 2019)



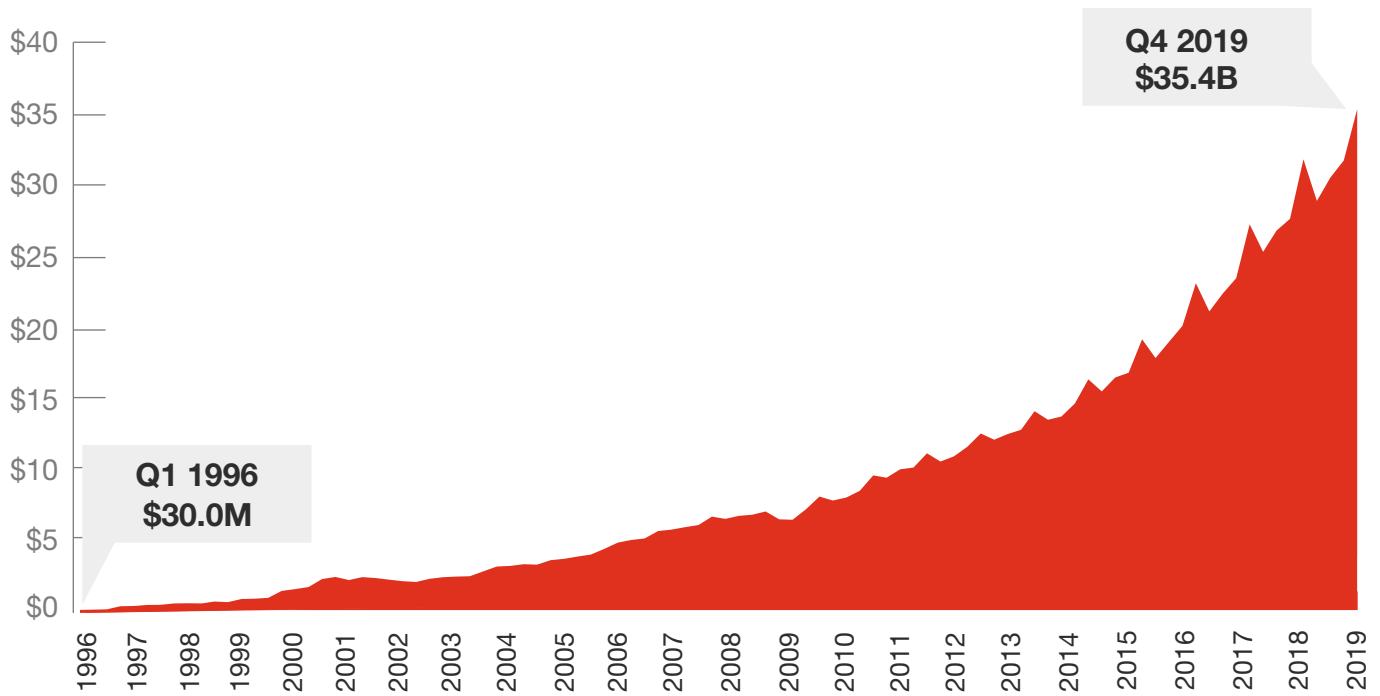
Source: IAB/PwC Internet Ad Revenue Report, FY 2019

Historical quarterly revenue trends

Quarterly growth continues upward trend reaching \$35.4 billion in Q4 2019

No matter the year, the fourth quarter leads the pack of advertising revenue dollars. This is due to advertising dollars following the consumer during the holiday season when the most retail spending occurs. Fourth quarter 2019 revenues (\$35.4 billion) alone tops 2010's full year total of \$26.0 billion.

Quarterly internet advertising revenue growth trends 1996-2019



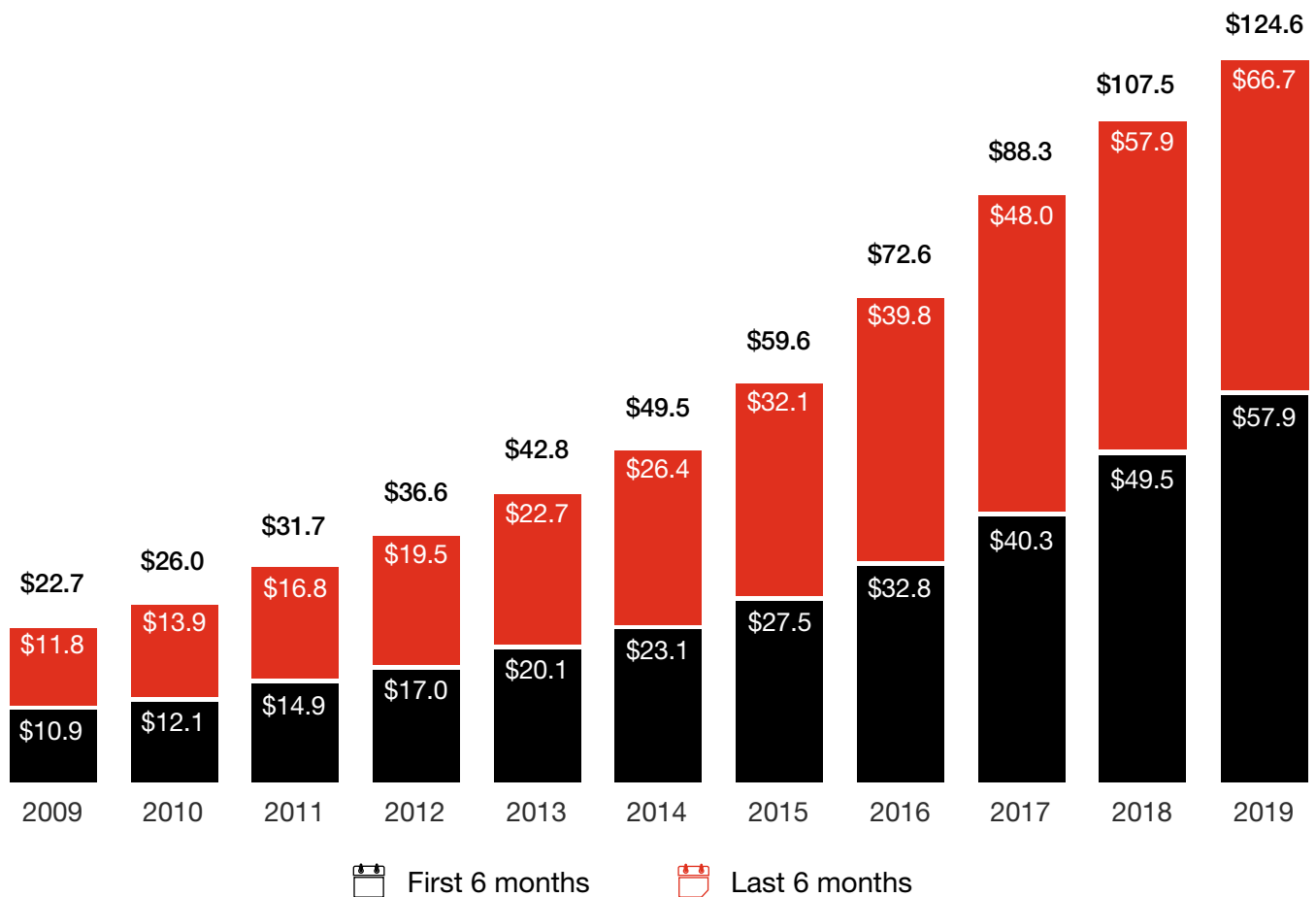
Source: IAB/PwC Internet Ad Revenue Report, FY 2019

Second half vs. first half revenues

Second half revenues help FY 19 revenues approach \$125 billion

Second half revenues totaled \$66.7 billion in 2019 representing an increase of \$8.8 billion from second half revenues in 2018, consistent with the broader trend of increased revenues in the second half of each year. The continued industry growth and the seasonal spike in fourth quarter ad spend both contribute to the historically high proportion of revenues in the second half of the year.

Historical revenue mix, first half vs. second half (2009-2019) (\$ billions)



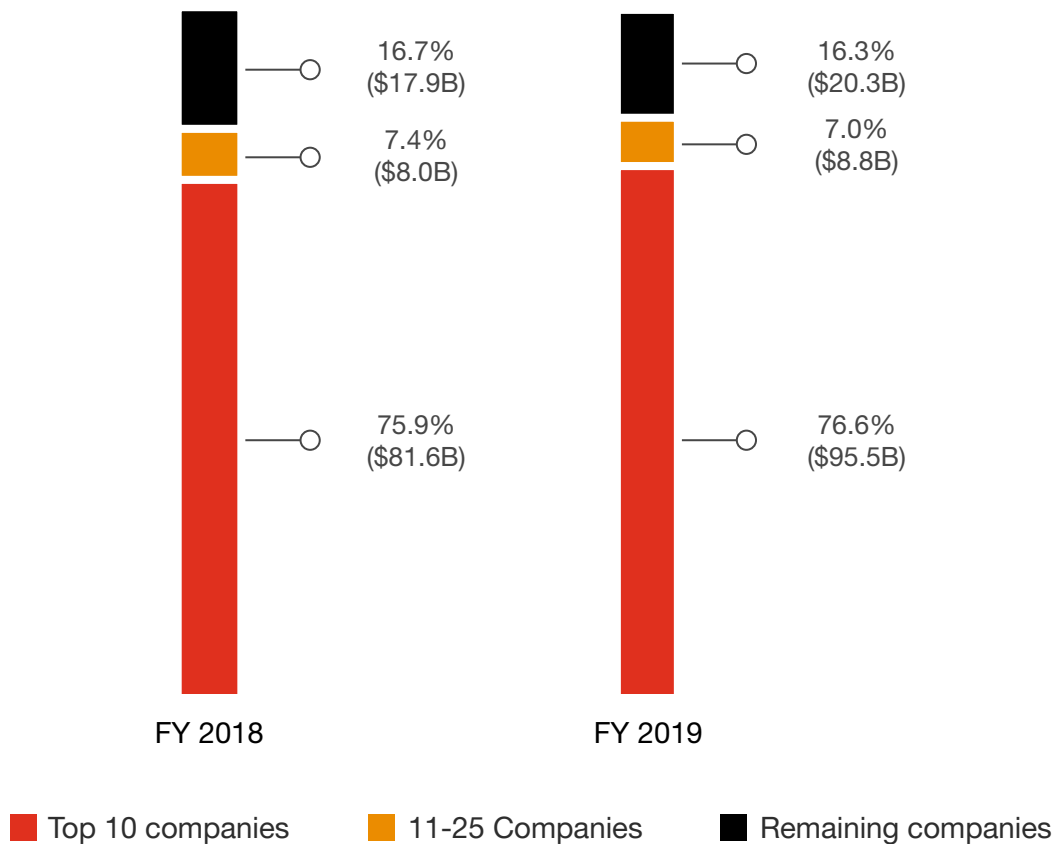
Source: IAB/PwC Internet Ad Revenue Report, FY 2019

Revenue concentration

Revenues approach \$100b for the top 10 ad-selling companies

The top 10 companies continued to gain market share on a quarterly basis. Q1 captured 76.1% of the market and then grew to 76.2%, 76.9% and 77.0% in Q2, Q3 and Q4, respectively. Companies ranked 11th to 25th accounted for 7.0% of revenues in FY 2019, which is lower than the 7.4% reported in FY 2018.

2019 vs. 2018 Internet advertising revenue concentration (\$ billions)



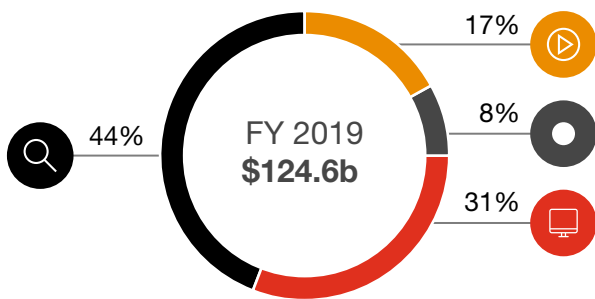
Note: Totals may not equal 100% due to rounding.

Source: IAB/PwC Internet Ad Revenue Report, FY 2019

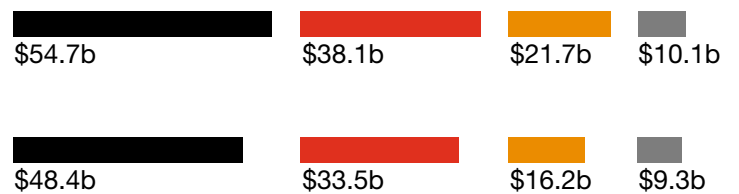
FY 2019 results, by format

Digital video continues to proliferate, showing the largest growth among formats in full year 2019.

2019 Advertising format by share



2019 vs. 2018 Advertising format, by revenue



Note: Totals may not equal 100% due to rounding.

Source: IAB/PwC Internet Ad Revenue Report, FY 2019

Search \$54.7 billion in FY 2019, up 12.9%. Format share of 43.9% of total internet advertising revenue for FY 2019 is slightly down from FY 2018's 45.1%

Video \$21.7 billion for FY 2019, up \$5.5 billion or 33.5% from FY 2018

Banner \$38.1 billion in FY 2019, representing a 13.8% increase from FY 2018 (\$33.5 billion). Banner related advertising includes ad banners/rich media (\$36.9 billion) and sponsorships (\$1.2 billion)

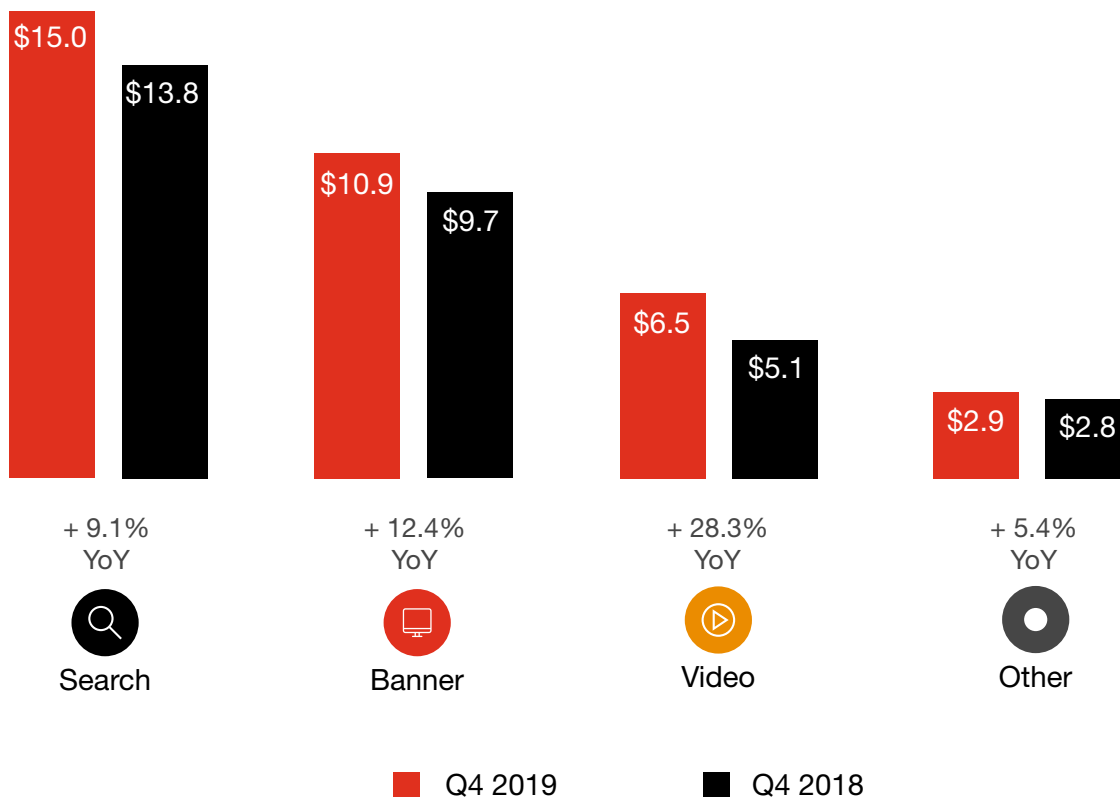
Other Accounted for 8.1% of total FY 2019 revenues was primarily composed of classifieds (\$4.0 billion), lead generation (\$3.4 billion), and audio (\$2.7 billion)

Q4 2019 results, by format

Video is the leader again across desktop and mobile devices

- The Search format totaled revenues of \$15.0 billion in Q4 2019, up 9.1% from Q4 2018 (\$13.8 billion)
- The Search format's representation of 42.4% of total internet advertising revenue for Q4 2019 is a slight year-over-year decrease from Q4 2018's 43.9%
- Digital video totaled \$6.5 billion for Q4 2019, up \$1.4 billion or 28.3%, from Q4 2018's \$5.1 billion
- Banner revenues totaled \$10.9 billion in Q4 2019, representing a 12.4% increase from Q4 2018 (\$9.7 billion). Banner related advertising includes ad banners/rich media (\$10.6 billion) and sponsorships (\$349 million)
- The Other category, which accounted for 8.2% of Q4 2019 revenues is primarily comprised of classifieds (\$1.1 billion), lead generation (\$978 million), and audio (\$864 million)

Q4 2019 vs. Q4 2018 Internet advertising format, by revenue (\$ billions)



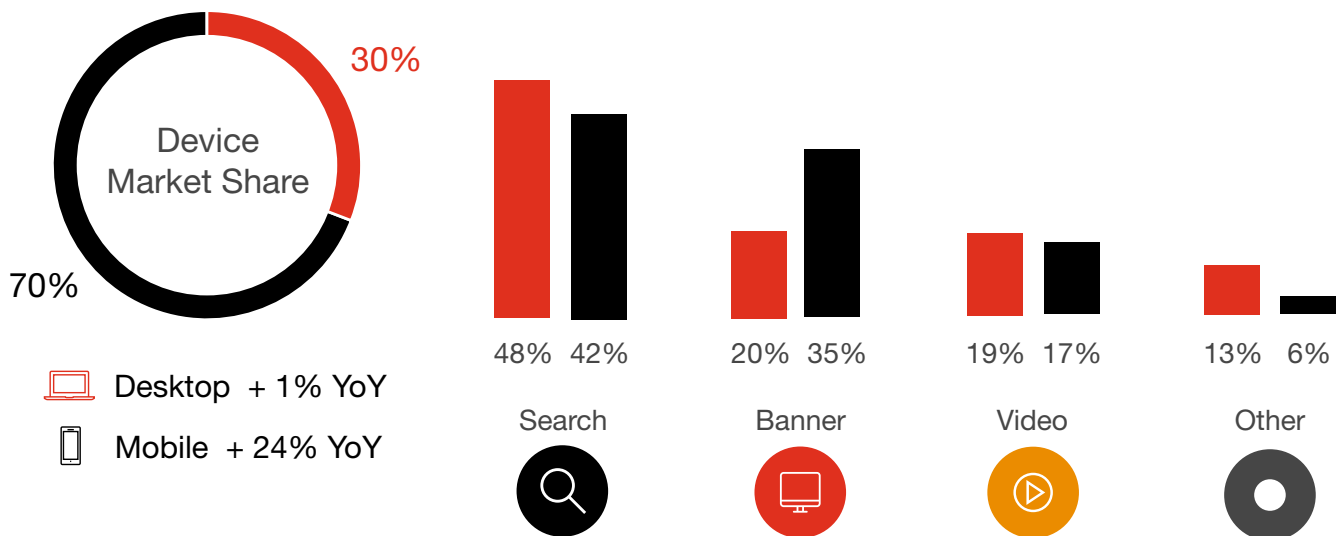
Source: IAB/PwC Internet Ad Revenue Report, FY 2019

Formats by device

Following user behavior, the shift to mobile continues across all formats

Desktop	Mobile
<ul style="list-style-type: none"> Search revenue grew .4% (totaling \$18.3 billion) year over year but overall desktop share decreased from 48.4% to 48.1% Banner revenue declined most significantly at almost 9% and overall desktop share dropped from 22.5% to 20.3% Video is showing the most promising signs of growth at 15.9% (totaling \$7.0 billion) and increased overall desktop share from 16.1% to 18.5% Within the Other format, Audio on desktop slightly increased share from 1.4% to 1.5% in 2019 	<ul style="list-style-type: none"> Search revenue increased 20.4% (totaling \$36.4 billion) from 2018 but overall mobile share decreased from 43.3% to 42.0% Banner share on mobile decreased from 35.8% to 35.1%, however, revenue increased 21.5% to \$30.4 billion Video demonstrated impressive growth at almost 44% from 2018 (totaling \$14.7 billion) and now makes up 17.0% of mobile market share Within the Other format, Lead Generation and Classifieds showed growth of approximately 16% year over year Audio on mobile devices grew 25.3% in large part due to the growth of podcasts

Advertising format share, desktop vs. mobile (2019)



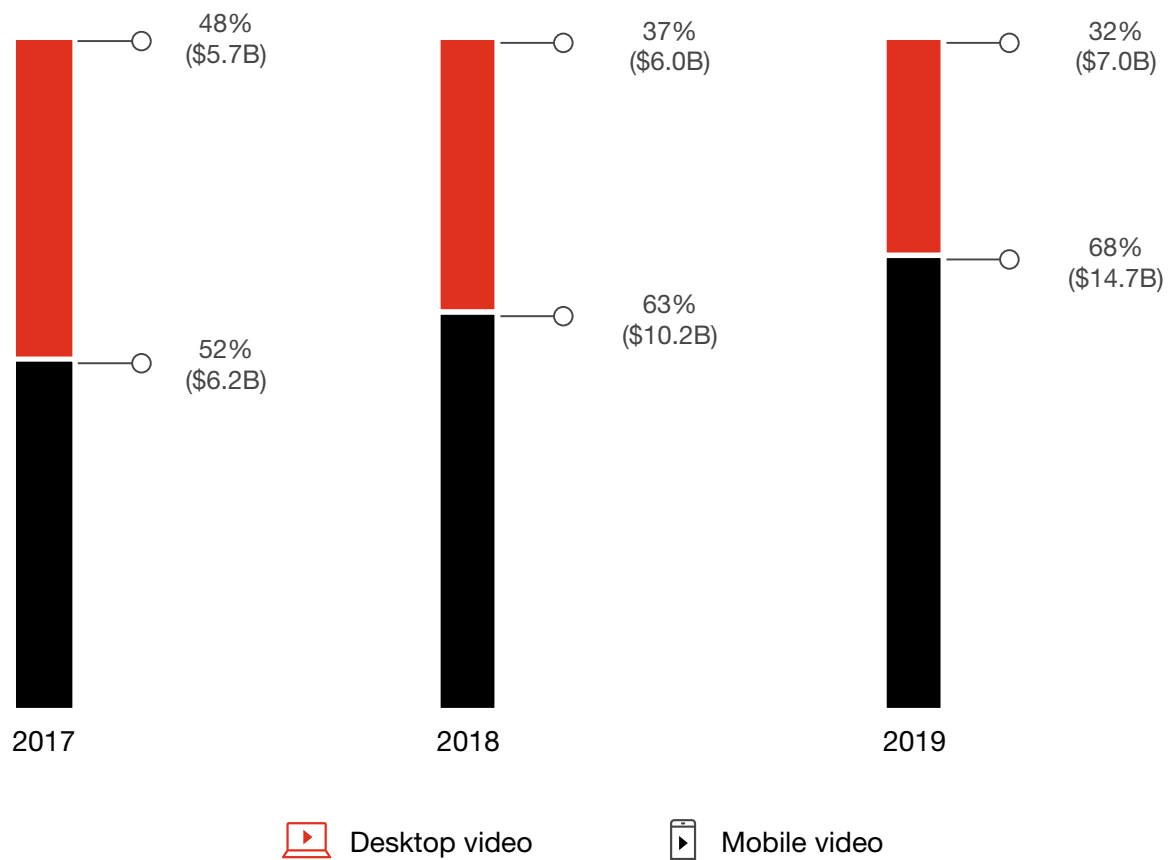
Source: IAB/PwC Internet Ad Revenue Report, FY 2019

Video (desktop vs. mobile)

Video makes up 17.4% of internet advertising revenues

- Total digital video, including mobile and desktop, rose to \$21.7 billion in FY 2019, up 33.5% from \$16.3 billion in FY 2018
- Growth of digital video on smartphones and tablets continued, reaching \$14.7 billion in FY 2019, a 43.9% rise from FY 2018
- Video ad revenues on mobile devices now comprise 67.8% of all digital video ad revenues, up from 62.9% in the prior year

Digital video revenues, full year results (2017 - 2019) (\$ billions)



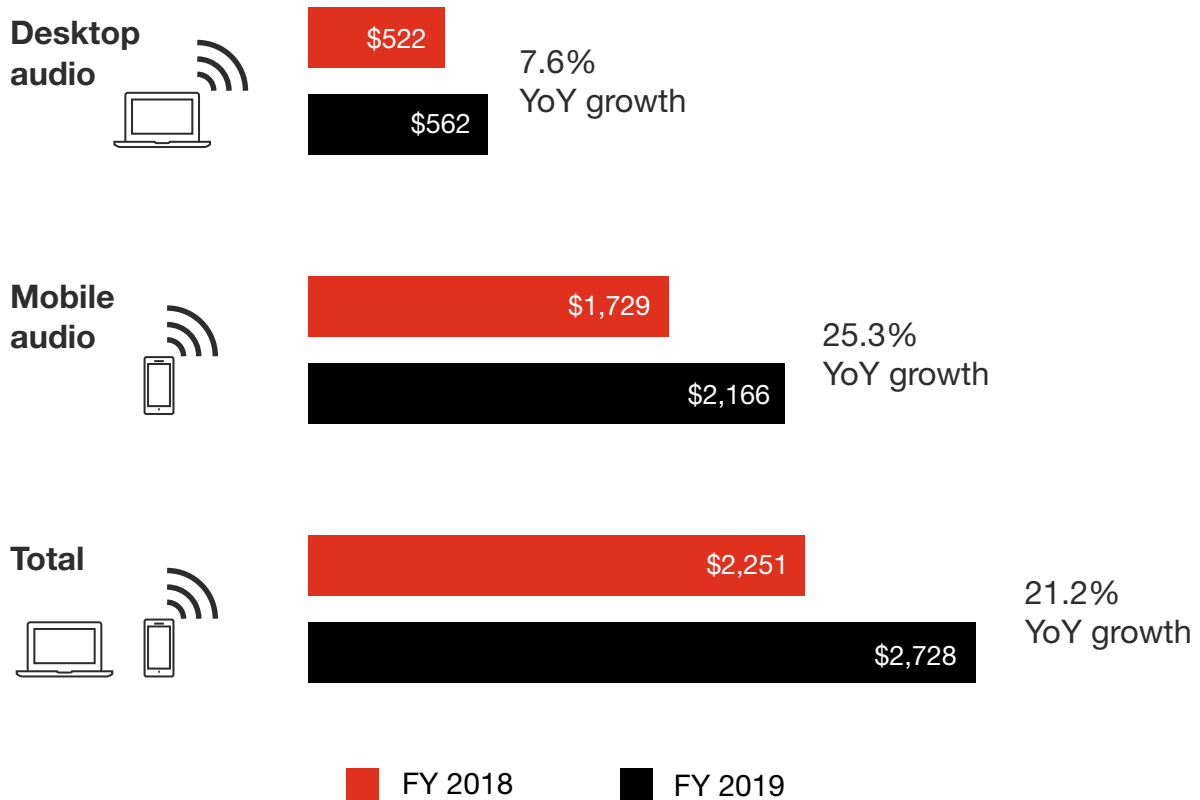
Source: IAB/PwC Internet Ad Revenue Report, FY 2019

Audio (desktop vs. mobile)

In 2019, internet audio advertising revenue reached \$2.7 billion

- This represents a 21.2% increase over FY 2018's revenue of \$2.3 billion
- Audio on mobile devices is outpacing desktop as growth in the former was 25.3% compared to 7.6%
- Mobile device audio revenue makes up 79.4% of overall audio internet ad revenues

Digital audio advertising revenue, full year results (2018 - 2019) (\$ millions)



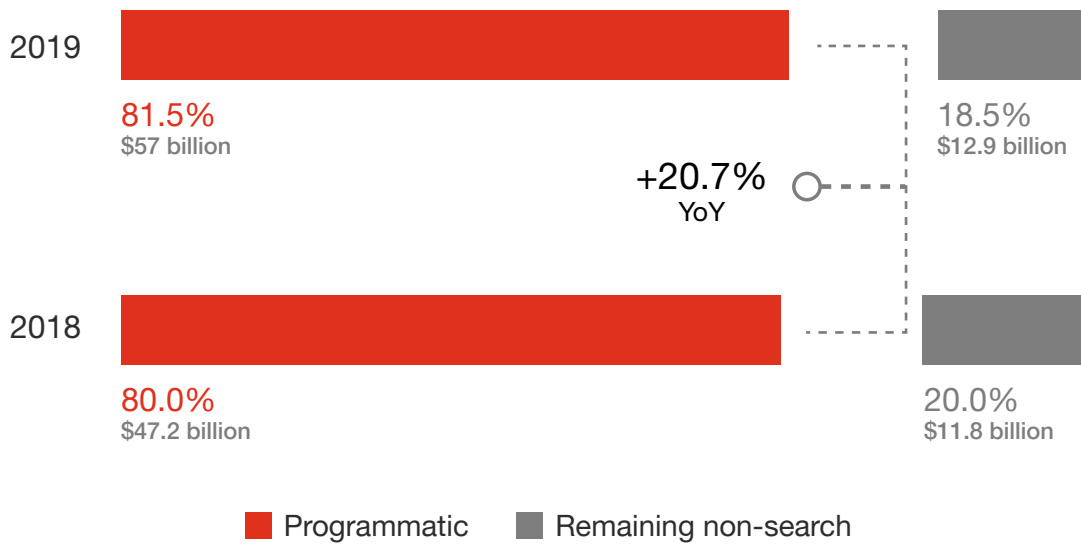
Source: IAB/PwC Internet Ad Revenue Report, FY 2019

Programmatic

Programmatic makes up 81% of non-search

Programmatic ad revenues reached \$57 billion in 2019, a \$9.8 billion increase from 2018. These revenues now account for 81.5% of non-search advertising.

Programmatic % of non-search, full year results (2018 - 2019)



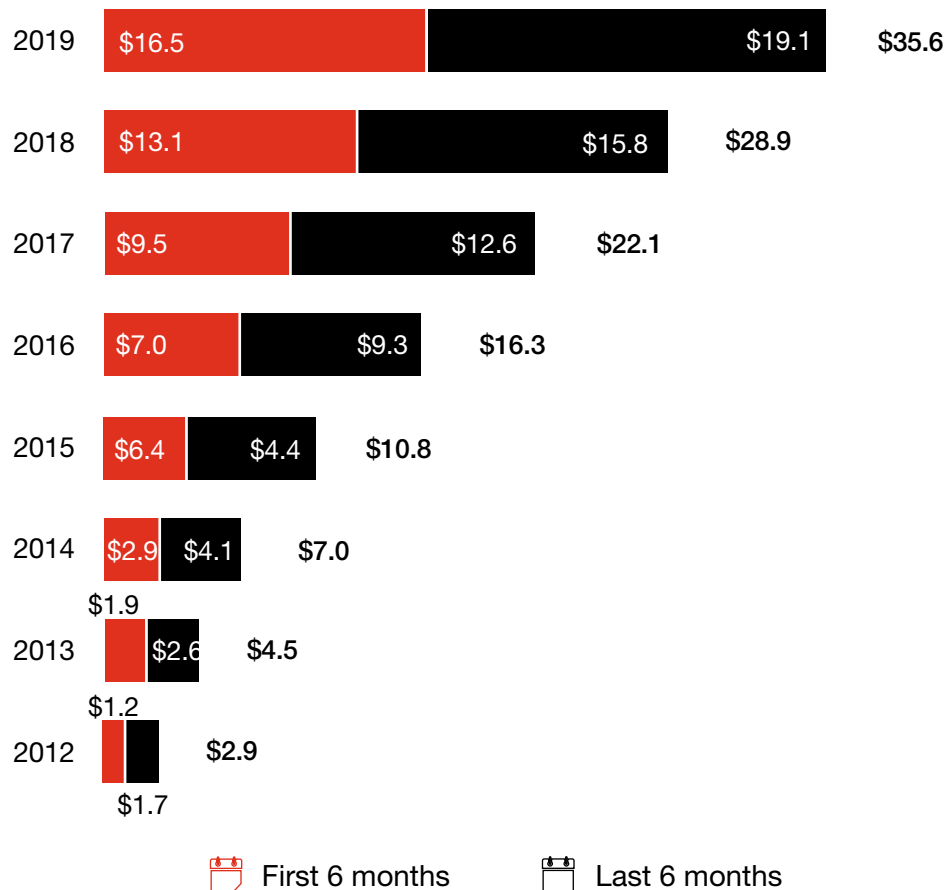
Source: IAB/PwC Internet Ad Revenue Report, FY 2019

Social media

Social accounts for 28.6% of total internet advertising

Social internet advertising revenues totaled \$35.6 billion in 2019, a \$6.7 billion gain (23%) from the prior year. For the second half of 2019, social media advertising revenues were \$19.1 billion, \$3.3 billion greater than in the second half of 2018. Social continues its full-year growth trends with increases reflected in the 43.0% compound annual growth rate of social from 2012 to 2019. Growth in absolute dollars remains very strong even as second half rate of growth is slowing vs. prior periods.

Social media advertising revenue, full year results (2012 - 2019) (\$ billions)



Note: We define social media as advertising delivered on social platforms, including social networking and social gaming websites and apps, across all device types, including desktop, laptop, smartphone and tablet.

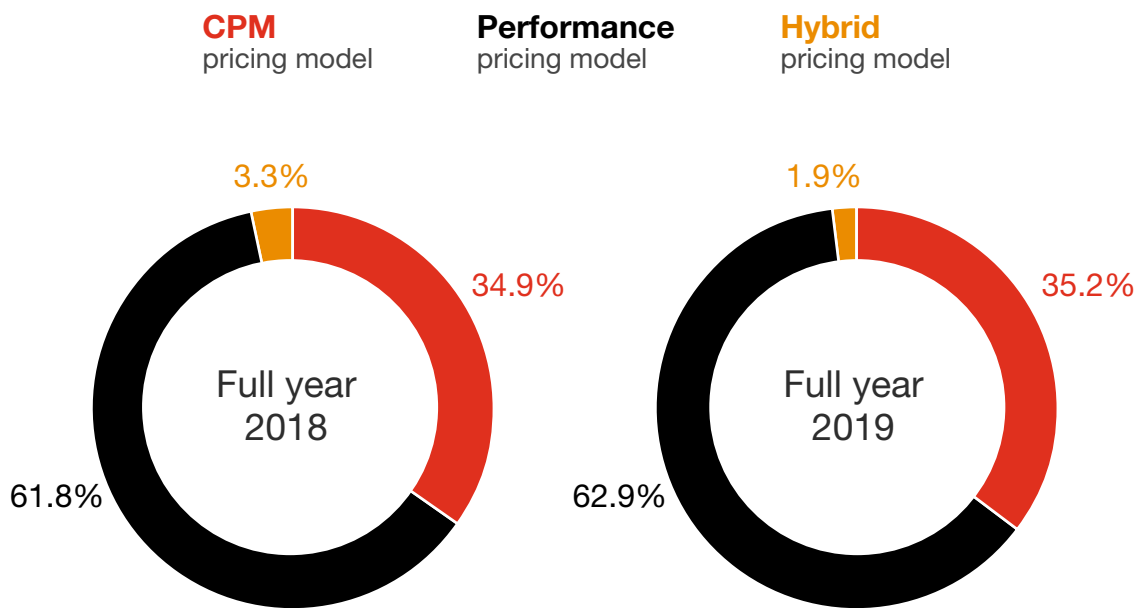
Source: IAB/PwC Internet Ad Revenue Report, FY 2019

Revenues by pricing model

Advertisers continue to pay on a performance pricing model

- 62.9% of FY 2019 internet advertising revenues were priced on a performance basis, up a few points from the 61.8% reported in FY 2018.
- 35.2% of FY 2019 internet advertising revenues were priced on a CPM basis, up from the 34.9% reported in FY 2018.
- 1.9% of FY 2019 internet advertising revenues were priced on a hybrid basis, a significant decrease from the 3.3% reported in FY 2018.

Revenues by pricing model, full year results (2018 - 2019)



Note: Totals may not equal 100% due to rounding.

Source: IAB/PwC Internet Ad Revenue Report, FY 2019


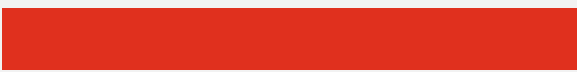









Advertising revenues and growth, by media

Internet advertising remains the dominant player when it comes to market size

Internet advertising rate of growth far outpaces all other media with the exception of the emerging esports industry. Esports is growing at 27% year over year which is stronger than internet advertising year over year growth of 15.9%. However, esports are still a relatively small percentage of the overall market with only \$221 million advertising revenues.

Advertising revenues and growth, by media (2019)

(\$ millions)

			FY18-FY19 growth
Internet advertising		\$124,615	+ 15.9%
TV advertising		\$70,576	- 0.6%
B2B		\$26,548	+ 1.3%
Radio		\$17,942	+ 0.9%
Magazines		\$15,610	- 2.4%
Newspaper		\$14,750	- 5.9%
OOH		\$10,380	+ 3.5%
Music		\$3,448	+ 4.3%
Video games		\$1,572	+ 7.7%
Cinema		\$991	+ 4.1%
Esports		\$221	+ 27.0%

Source: PwC Entertainment & Media Outlook, 2019 - 2023

Appendix

About the IAB internet advertising revenue report

Commissioned by the IAB and conducted by PwC Advisory Services LLC (“PwC”) on an ongoing basis, with results released quarterly, the “IAB Internet Advertising Revenue Report” was initiated by the Interactive Advertising Bureau (IAB) in 1996. This report utilizes data and information reported directly to PwC from companies selling advertising on the internet as well as publicly available corporate data.

The results reported are considered to be a reasonable measurement of internet/online/mobile advertising revenues because much of the data is compiled directly from information supplied by companies selling advertising online. The report includes data reflecting desktop and mobile online advertising revenues from websites, commercial online services, ad networks and exchanges, mobile devices, and email providers, as well as other companies selling online advertising.

The report is conducted independently by PwC on behalf of the IAB. PwC does not audit the information and provides no opinion or other form of assurance with respect to the information. Only aggregate results are published and individual company information is held in strict confidence with PwC. Further details regarding scope and methodology are provided in the appendix of this report.

Definitions of advertising formats and pricing models

Banner advertising	<p>Ad banners (also known as banner ads) are one of the most dominant forms of advertising on the internet. Banner ads are a form of display advertising that can range from a static graphic to full motion video.</p> <p>The IAB New Standard Ad Unit Portfolio: Lightweight, Cross-Screen, and Flexible size ads that implement LEAN principles. Ad Types included Horizontal, Vertical, Tiles, Full Page Portrait, Full Page Landscape and Feature Phone Sizes.</p>
Sponsorship	<p>Advertiser pays for custom content and/or experiences, which may or may not include ad elements such as display advertising, brand logos, advertorial, or pre-roll video. Sponsorships fall into several categories:</p> <ul style="list-style-type: none">• Spotlights are custom-built pages incorporating an advertiser's brand and housing a collection of content usually around a theme• Advergaming can range from an advertiser buying all the ad units around a game or a "sponsored by" link to creating a custom branded game experience• Content & Section Sponsorship is when an advertiser exclusively sponsors a particular section of the site or email (usually existing content) re-skinned with the advertiser's branding• Sweepstakes & Contests can range from branded sweepstakes on the site to a full- fledged branded contest with submissions and judging
Search	<p>Fees advertisers pay online companies to list and/or link their company site domain name to a specific search word or phrase (includes paid search revenues).</p> <ul style="list-style-type: none">• Paid listings – payments made for clicks on text links that appear at the top or side of search results for specific keywords. The more a marketer pays, the higher the position it gets. Marketers only pay when a user clicks on the text link.• Contextual search – payments made for clicks on text links that appear in an article based on the context of the content, instead of a user-submitted keyword. Payment only occurs when the link is clicked.• Paid inclusion – payments made to guarantee that a marketer's URL is indexed by a search engine (i.e. advertiser isn't paid only for clicks, as in paid listings).• Site optimization – payments made to optimize a site in order to improve the site's ranking in search engine results pages (SERPs). (For example, site owner pays a company to tweak the site architecture and code, so that search engine algorithms will better index each page of the site).
Lead generation	<p>Fees paid by advertisers to online companies that refer qualified potential customers (e.g., auto dealers which pay a fee in exchange for receiving a qualified purchase inquiry online) or provide consumer information (demographic, contact, behavioral) where the consumer opts in to being contacted by a marketer (email, postal, telephone, fax). These processes are priced on a performance basis (e.g., cost-per-action, -lead or -inquiry), and can include user applications (e.g., for a credit card), surveys, contests (e.g., sweepstakes) or registrations.</p>
Classifieds and auctions	<p>Fees paid to advertisers by online companies to list specific products or services (e.g., online job boards and employment listings, real estate listings, automotive listings, auction-based listings, yellow pages).</p>
Rich media	<p>Interactive features that engage the user and initiate new content experiences. Interactive features could be animation or elements that trigger ad expansion or video play or other interactive experiences. Rich media experiences that require files or creative assets in addition to initial load and subload limits should be user initiated. This definition also includes any advertising experience where visiting a website in an initial browser window initiates a secondary browser window to deliver an ad impression directly above the initial browser window.</p> <p>The IAB New Standard Ad Unit Portfolio: Lightweight, Cross-Screen, and Flexible size ads that implement LEAN principles. Ad Types included Horizontal, Vertical, Tiles, Full Page Portrait, Full Page Landscape and Feature Phone Sizes.</p> <p>Video commercials that appear in video players are considered Digital Video Ads, not Rich Media.</p>

Definitions of advertising formats and pricing models

Rich media (continued)	<p>“Interstitials” are defined as between-the-page ad units, also known as “interstitial” ads, between-the-page ad units display as a user navigates from one webpage to the next webpage. The ad appears after the user leaves the initial page, but before the target page displays on the user’s screen. The ad is self-contained within its own browser window and may not appear as an overlay on the target page content. Forms of interstitials can include a variation of the following terms:</p> <ul style="list-style-type: none"> • Splash screens – a preliminary page that precedes the regular home page of a Web site that usually promotes a particular site feature or provides advertising. A splash page is timed to move onto the home page after a short period of time. • Superstitials – ads that are distinct from interstitials because of the much higher ad quality, and that they play instantly (ads are fully downloaded before they are displayed). • Expandable Ads - Rich media ads that can be enlarged to dimensions beyond the initial dimensions of the placement they fill on the webpage. The user initiates expanding events, sometimes after the ad initially expands briefly on its own to catch the user’s attention. • Overlay: An ad unit that displays over the webpage content briefly when initiated. • Pop-up ads and pop-under ads – an advertisement that appear in a separate window which automatically loads over an existing content window, without an associated banner.
Digital audio	<p>Refers to partially or entirely advertising-supported audio content available to consumers on a streaming or downloaded basis, delivered via the wired or mobile internet. This includes a wide range of services, such as the following:</p> <ul style="list-style-type: none"> • Online audio streams of terrestrial radio broadcasts • Online only streaming radio stations with either professional or amateur DJs and/or hosts • On-demand, streamed audio services that create playlists of artists, tracks and/or genres based on user preferences without human editors or DJs • Downloaded audio content accessed via a website or hosting application for time-shifted listening; e.g. podcast • Music or spoken word audio content delivered within a different website or application; (e.g. in-game music services)
Digital video advertising	<p>Advertising that appears before, during or after digital video content in a video player (i.e. pre-roll, mid-roll, post-roll video ads). Digital Video Ads include TV commercials online and can appear in streaming content or in downloadable video. Display-related ads on a page (that are not in a player) which contain video are categorized as rich media ads.</p>
Mobile advertising	<p>Advertising tailored to and delivered through wireless mobile devices such as smartphones, feature phones (e.g. lower-end mobile phones capable of accessing mobile content), and media tablets. Typically taking the form of static or rich media display ads, text messaging ads, search ads, or audio/video spots, such advertising generally appears within mobile websites (e.g. websites optimized for viewing on mobile devices), mobile apps (e.g. applications for Smartphones running proprietary or open operating systems), text messaging services (i.e. SMS, MMS) or within mobile search results (i.e., 411 listings, directories, mobile-optimized search engines).</p> <p>Mobile advertising formats include: Search, Display-related (banner ads, video, sponsorships, and rich media), and Other (lead generation, classifieds and directories, and audio) advertising served to mobile devices.</p>
Social media advertising	<p>Advertising delivered on social platforms, including social networking and social gaming websites and apps, across all device types, including desktop, laptop, smartphone and tablet.</p>
Impression-based	<p>Cost-per-thousand (CPM) pricing model</p>
Performance-based	<p>Cost-per-click, sale, lead, acquisition, or application (e.g., credit card application) or straight revenue share (e.g., % commission paid upon sale)</p>
Hybrid	<p>Any mix of impression-based pricing plus performance-based compensation within one ad campaign</p>

Survey scope and methodology

Survey scope The Interactive Advertising Bureau (IAB) retained PwC to establish a benchmark for measuring the growth of internet/online/mobile advertising revenues. The “IAB internet advertising revenue report” is part of an ongoing IAB mission to provide an accurate barometer of internet advertising growth.

To achieve differentiation from existing estimates and accomplish industry-wide acceptance, key aspects of the survey include:

- Obtaining historical data directly from companies generating internet/online/mobile advertising revenues;
- Making the survey as inclusive as possible, encompassing all forms of internet/online/mobile advertising, including websites, consumer online services, ad networks and exchanges, mobile devices, and email providers; and
- Ensuring and maintaining a confidential process, releasing only aggregate data.

PwC performs the following:

- Compiles a database of industry participants selling internet/online and mobile advertising revenues;
- Conducts a quantitative mailing survey with leading industry players, including Web publishers, ad networks and exchanges, commercial online service providers, mobile providers, email providers, and other online media companies;
- Acquires supplemental data through the use of publicly disclosed information;
- Requests and compiles several specific data items, including monthly gross commissionable advertising revenue by industry category and transaction;
- Identifies non-participating companies and applies a conservative revenue estimate based on available public sources; and,
- Analyzes the findings, identifies and reports key trends.

Historical data findings

Annual and quarterly revenue growth

	Revenue (in mil)	Q/Q growth	Y/Y growth
Q1 2003	\$1,632	3%	7%
Q2 2003	\$1,660	2%	14%
Q3 2003	\$1,793	8%	24%
Q4 2003	\$2,182	22%	38%
Total 2003	\$7,267		21%
Q1 2004	\$2,230	2%	37%
Q2 2004	\$2,369	6%	43%
Q3 2004	\$2,333	-2%	30%
Q4 2004	\$2,694	15%	24%
Total 2004	\$9,626		33%
Q1 2005	\$2,802	4%	25%
Q2 2005	\$2,985	7%	26%
Q3 2005	\$3,147	5%	35%
Q4 2005	\$3,608	15%	34%
Total 2005	\$12,542		30%
Q1 2006	\$3,848	7%	37%
Q2 2006	\$4,061	6%	36%
Q3 2006	\$4,186	3%	33%
Q4 2006	\$4,784	14%	33%
Total 2006	\$16,879		35%
Q1 2007	\$4,899	2%	27%
Q2 2007	\$5,094	4%	25%
Q3 2007	\$5,267	3%	26%
Q4 2007	\$5,946	13%	24%
Total 2007	\$21,206		26%
Q1 2008	\$5,765	-3%	18%
Q2 2008	\$5,745	0%	13%
Q3 2008	\$5,838	2%	11%
Q4 2008	\$6,100	4%	2%
Total 2008	\$23,448		11%
Q1 2009	\$5,468	-10%	-5%
Q2 2009	\$5,432	-1%	-5%
Q3 2009	\$5,500	1%	-6%
Q4 2009	\$6,261	14%	3%
Total 2009	\$22,661		-3%
Q1 2010	\$5,942	-5%	9%
Q2 2010	\$6,185	4%	14%
Q3 2010	\$6,465	5%	18%
Q4 2010	\$7,449	15%	19%
Total 2010	\$26,041		15%
Q1 2011	\$7,264	-2%	22%
Q2 2011	\$7,678	6%	24%

	Revenue (in mil)	Q/Q growth	Y/Y growth
Q3 2011	\$7,824	2%	21%
Q4 2011	\$8,970	15%	20%
Total 2011	\$31,735		22%
Q1 2012	\$8,307	-7%	14%
Q2 2012	\$8,722	5%	14%
Q3 2012	\$9,236	6%	18%
Q4 2012	\$10,307	12%	15%
Total 2012	\$36,570		15%
Q1 2013	\$9,806	-5%	18%
Q2 2013	\$10,260	5%	18%
Q3 2013	\$10,609	3%	15%
Q4 2013	\$12,106	14%	17%
Total 2013	\$42,781		17%
Q1 2014	\$11,414	-6%	16%
Q2 2014	\$11,678	2%	14%
Q3 2014	\$12,207	5%	15%
Q4 2014	\$14,152	16%	17%
Total 2014	\$49,451		16%
Q1 2015	\$13,179	-7%	16%
Q2 2015	\$14,302	9%	23%
Q3 2015	\$14,688	3%	20%
Q4 2015	\$17,382	18%	23%
Total 2015	\$59,550		20%
Q1 2016	\$15,872	-9%	20%
Q2 2016	\$16,917	7%	18%
Q3 2016	\$18,204	8%	24%
Q4 2016	\$21,647	19%	25%
Total 2016	\$72,640		22%
Q1 2017	\$19,404	-10%	22%
Q2 2017	\$20,847	7%	23%
Q3 2017	\$21,832	5%	20%
Q4 2017	\$26,183	20%	21%
Total 2017	\$88,265		22%
Q1 2018	\$23,913	-9%	23%
Q2 2018	\$25,628	7%	23%
Q3 2018	\$26,573	4%	22%
Q4 2018	\$31,373	18%	20%
Total 2018	\$107,487		22%
Q1 2019	\$28,019	-11%	17%
Q2 2019	\$29,898	7%	17%
Q3 2019	\$31,271	5%	18%
Q4 2019	\$35,425	13%	13%
Total 2019	\$124,615		16%

Source: IAB/PwC Internet Ad Revenue Report, FY 2019

About the Interactive Advertising Bureau

The Interactive Advertising Bureau (IAB) empowers the media and marketing industries to thrive in the digital economy. Its membership is comprised of more than 650 leading media and technology companies that are responsible for selling, delivering, and optimizing digital advertising or marketing campaigns. The trade group fields critical research on interactive advertising, while also educating brands, agencies, and the wider business community on the importance of digital marketing.

In affiliation with the IAB Tech Lab, it develops technical standards and best practices. IAB and the IAB Education Foundation are committed to professional development and elevating the knowledge, skills, expertise, and diversity of the workforce across the industry.

Through the work of its public policy office in Washington, D.C., IAB advocates for its members and promotes the value of the interactive advertising industry to legislators and policymakers. Founded in 1996, the IAB is headquartered in New York City and has a San Francisco office.

Overall report guidance provided by IAB leadership

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PwC's technology and entertainment, media, and communications practices

As business, accounting, and tax advisors to many of the world's leading technology, media, and telecommunications (TMT) companies, PwC (www.pwc.com/us/tmt) has an insider's view of trends and developments driving the industry. With approximately 1,200 practitioners serving TMT clients in the United States, PwC is deeply committed to providing clients with industry experience and resources.

In recent years, our work in TMT has included developing strategies to leverage digital technology, identifying new sources of financing, and marketplace positioning in industries characterized by consolidation and transformation. Our experience reaches across all geographies and segments, including broadband, wireless, film, television, music, publishing, advertising, gaming, sports, theme parks, computers and networking, software and technology services. With thousands of practitioners around the world, we're always close at hand to provide deep industry knowledge and resources.

Our services include:

- Business assurance services
- Web audience measurement and advertising delivery auditing and advisory
- IAB Measurement Certification Compliance auditing
- Privacy policy structuring, attestation, and compliance advisory
- Mergers & acquisitions assistance
- Tax planning and compliance
- Capital sourcing and IPO assistance
- Marketing & Media operations enablement

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